

Description

5 BACKGROUND OF INVENTION

This invention is further intended to provide constructions that satisfy standards for standard regulation car seats, as we know them, and also provide such seats with a convenient, adjustable handle and with retractable wheels, for a safe and easy fit into a vehicle.

5 Additionally this invention is intended to allow a sleeping child to remain in the seat, without having to be disturbed, when the seat is removed from the vehicle and rolled to a destination.

 This invention, in some embodiments, is also intended to provide a full length "Peek-a-boo" canopy in inclement weather, and also to keep a child safe
10 from any flying debris while being rolled.

 This invention, in some embodiments, is further intended to provide spring action wheels for the seat to absorb shocks while the seat is being rolled on rough terrain.

 Further, this invention, in some embodiments, is intended to keep an
15 adjustable handle from accidentally being extended while carrying a child by using "Butterfly bolts" to lock the handle into place while it is extended or retracted.

 Another intent of this invention, in some embodiments, is to allow the handle to be conveniently and desirably positioned at the foot or head of stroller.

 This invention, in some embodiments, is also intended to supply a
20 brake at the base of the wheels, to allow the car seat to remain secure and in place while the car seat is not mobile.

SUMMARY OF THE INVENTION

 This invention combines and incorporates features such as are found
25 in already existing regulation car seats with features found in various other devices, so as to obtain a resultant construction that realizes the objects and the advantages

sought for the invention, with just a few minor adjustments relative to existing regulation car seats. The invention employs a handle that is similar in many respects to, but modified from, a standard car seat handle so as to extend and retract for rolling or carrying the car seat. The handle of the resultant construction is also
5 preferably able to be positioned at the head or foot of the car seat, allowing the child to face to or away from the parent. The handle is preferably also equipped with a hand grip for easy maneuvering. The invention has wheels that can be folded up into the base of the car seat for storage or locked down for rolling. The invention is preferably also equipped with spring action wheels which absorb shocks while
10 rolling. The sides of the construction are preferably higher to keep the child's arms and legs from hanging over the sides. In a preferred form, the invention is additionally equipped with a wheel brake, similar to a stroller brake, which allows the construction to remain in place when it is not mobile.

In one highly advantageous embodiment of the invention, a full
15 length, "Peek-a-boo" canopy is provided. The canopy covers the entire length of the car seat. It is equipped with a "Peek-a-boo" window that allows the parent to monitor the child. The canopy protects against inclement weather as well as debris while child is being rolled.

In another embodiment of the invention, the handles are adjustable
20 and lockable into place with butterfly bolts. The butterfly bolts prevent the handles from being accidentally released. Manual manipulation of the butterfly bolts is needed to lock the handle in its extended or retracted positions.

BRIEF DESCRIPTION OF THE DRAWINGS

25 Comprehension of the invention is facilitated by the reading of the following detailed description, in conjunction with the annexed drawings, in which:

FIG. 1 is an illustration of a standard regulation car seat with invention modifications shown.

FIG. 2 illustrates the full length, "Peek-a-boo" canopy, with window.

FIG. 3 illustrates a version of a standard regulation car seat with invention modifications shown in three dimensions.

FIG. 4a depicts an embodiment showing the handle in an extended position with front or rear positioning, and use of the wheel brake.

FIG. 4b depicts a butterfly bolt and the way in which said butterfly bolt can be used to lock and unlock wheels and handles.

FIG. 5 depicts an embodiment showing wheel placement when the wheel assemblies are in a storage condition in the embodiment.

FIG. 6 further depicts and describes a "Peek-a-boo" canopy and its attributes.

DETAILED DESCRIPTION

In FIG. 1 hand grip (a) is included as part of handle (b) and is arranged for easy carrying or pushing. Handle (b) extends upward for rolling. A wheel brake, such as wheel brake (c) is used to keep wheels (f) stationary when the car seat is not mobile. The car seat portion includes higher sides (d) to protect a child's arms and legs while the car seat is rolling. The wheels (f) fold into a base (e) of the car seat to allow the car seat to fit smoothly into a vehicle without damaging the car seat. The wheels (f) lock down and into place for rolling.

In FIG. 2 a full length, pull-over canopy (a) is provided to cover the child in inclement weather and to protect the child from debris while the car seat is rolling. When the canopy is not in use it can be folded down to the foot of the car

seat. A "Peek-a-boo" window (b) in the canopy is used to monitor the child and also allows the child to see the parent.

FIG. 3 is a view similar to FIG. 1 depicting a similar embodiment to that of FIG. 1 in three dimensions. FIG. 3 shows the car seat converted into the stroller. Wheels are included on the underside, and the handle is modified to provide a three level adjustment, to allow the user to place the handle at three different height positions.

FIG. 4a depicts an embodiment with the handle extended and the wheels locked down for rolling, and with a wheel brake for use when stroller is in a stationary position. FIG. 4a shows the use of in-line wheels on both sides of the underside of the car seat. The wheels are preferably equipped with spring action to absorb shocks encountered when the car seat is rolling.

FIG. 4b illustrates butterfly bolts and the manner in which they may be used to secure the handle and wheels when in carrying or rolling positions. Although butterfly bolts are used in this embodiment of the invention, other devices and methods known in the art can also be used.

FIG. 5 is a partial cutaway view showing the wheels folded under for placement of the car seat in a vehicle. The wheels are mounted so they can be folded into the recess manually, or by use of a mechanical retraction method. In this embodiment, the wheels are locked into place with butterfly bolts. Various methods for retracting and locking wheels located on undersides of various devices are known in the prior art, such as those found in patents relating to skates, including: U.S. Patent No. 3,983,643 to Schreyer et al., U.S. Patent No. 4,333,429 to Schaefer, U.S. Patent No. 5,797,609 to Fichepain, and U.S. Patent Nos. 6,120,039 and 6,343,800 to Clementi.

FIG. 6 is another view showing the use of a "Peek-a-boo" canopy having various other attributes. The canopy may utilize water repellent fabric and include a clear plastic window. As shown in FIG. 6, an expandable canopy is attached, at its center, to a bar and is extendible or expandable in both directions.

5 When the center bar is rotated to the mid-point of the seat, the canopy can be pulled up to cover the top half of the car seat, pulled down to cover the bottom half of the car seat, or extended or expanded towards both the top and the bottom to cover the entire car seat. When not in use the canopy may fold together at the bar, and the bar can be rotated down to foot of car seat. Although this particular type of canopy is
10 well suited for the intended purposes, other canopy configurations, known generally in the art, can also be used.

This invention has all the advantages of a car seat in that it can be used with the wheels stored underneath in the conventional manner. The car seat can be used in the car and removed as a conventional car seat. It can easily and
15 quickly be converted to a stroller for transporting the baby relatively short distances, thereby offering freedom from carrying the weight of the child plus the additional weight of the seat. Additionally, the risk of the child falling or being dropped is eliminated because the car seat is rolled along instead of carried along. When used as a stroller, this invention enjoys the additional safety features of a car seat, such as
20 impact resistant construction and the five point restraint system to hold the baby safely in place. The extending handle provides the convenience of a stroller, and the ability to position the handle at the top or the bottom of the seat gives the user the choice of stroller or carriage orientation.

Although the invention has been described in terms of specific
25 embodiments and applications, persons skilled in the art can, in light of this teaching, can generate additional embodiments without exceeding the scope or

departing from the spirit of the claimed invention. In addition, specific features of the invention are shown in some drawings and not in others for convenience only, as each feature may be combined with any or all of the other features in accordance with the invention. Accordingly, it is to be understood that the drawings and
5 description in this disclosure are proffered to facilitate comprehension of the invention and should not be construed to limit the scope thereof.